C. Amendments to the Drawings

The attached sheets of drawings include new Figures 1-6 and amendment of pending drawing Figures 1-13 by renumbering same to Figs. 7-19 and changing the reference numerals to correspond to the reference numerals found in new Figures 1-6 and the amendments to the specification noted above.

II. REMARKS

A. Introduction

In this Office Action claims 5-15 and 32-61 are noted as pending and are rejected.

In this Response, the same amendments and new claims as in the August 25, 2005 Response are re-introduced, i.e., independent claims 5, 7, 9, 11, 12 and 14, are amended and new independent claims 58-61 are added, and remarks are provided.

B. New Matter Rejection/Objection

The Office Action takes the position that the proposed amendment to the claims regarding "a motor for a propelling a toy vehicle" is unsupported in the application as filed.

In the August 25, 2005 Response, page 11, however, Applicant brought the Examiner's attention to numbered paragraphs of the specification supporting the structure and benefits claimed. Most particular to the running toy, note numbered paragraph 3 ("In order to incorporate such a motor, for example, in a toy or the like"), numbered paragraph 47 which discusses a rotary shaft in the motor, and numbered paragraph 53 which indicates that "the above-described motor can be incorporated in a small-sized vehicle model".

In light of at least this disclosure and the many propelled vehicles in the prior art relying on electric motors having driving shafts (such as the cited Maxim reference, U.S. Patent No. 4,476,648, e.g., Col. 3, lines 3-5), it is believed that one of ordinary skill, would have known that the motor herein was for a propelled toy vehicle.

For the purposes of any necessary appeal, Applicant takes the position that the application as filed supports the claim amendments for one of ordinary skill and no new matter was introduced by the proposed claim amendments.

In the alternative, a Petition is submitted herewith to claim domestic priority of co-pending application serial no. 10/086,216, which shares an inventor, Mr. Suimon, with the present application.

Assuming this Petition is granted, the specification has been amended herein to expressly claim priority and to incorporate by reference the subject matter thereof. Most particularly, e.g., Figs. 1-6 and numbered paragraphs 2, 6 and 23-30 of Serial No. 10/086,216 describe the present application's motor used in a running toy.

The present application has been amended to expressly incorporate the subject matter of Figs. 1-6 (as new figures 1-6), and numbered paragraphs 2, 6 and 23-30 from Serial No.

10/086,216. Further, the pending figures and specification of the present application have been amended to correspond to the reference numerals introduced by new Figures 1-6. A marked-up substitute specification is submitted herewith to show the amendments made to the specification, as well as a clean copy of the substitute specification.

In light of the above, it is respectfully submitted that the claims, as amended herein (in this regard, the claims amended by the August 25, 2005 Response are re-introduced without further amendment), are fully supported by the application. It is respectfully requested that the "new matter" rejection/objection be withdrawn.

C. Prior Art Rejection

All pending claims are rejected as being made obvious by a combination of Maxim, U.S. Patent No. 4,476,648 and Sato, Japanese Reference No. 10-84650.

For the following reasons, it is respectfully submitted that the present invention, as recited by claims 5-15 and 32-61, was not rendered obvious for the following reasons.

1. The Present Invention

The conventional motor for propelling a toy vehicle usually includes a gear at one end thereof on a shaft, and two electrodes at the opposite end of the motor which are connected via wires soldered thereto and extending to a battery.

With the present invention, a cylindrical conductive casing is used as a point of electrical contact for a motor electrode, either connected directly with a battery, or via another conductive member. The other electrical connection of the motor is through another electrode on an insulative small case at an end of the cylindrical conductive casing.

The structure of the present invention, in comparison to the prior art discussed above, allows for greater design flexibility and fewer parts, and therefore greater miniaturization of the toy vehicle, enhanced rigidity of the terminals and/or facilitated connection of the conductive members extending from the battery to the motor, especially with the need for solder connections. Also, the conductive side of the motor in one embodiment can merely contact the battery directly, and the other electrode on the end of the motor can be received by a conductive member. Moreover, the motor can be removed and replaced easily, when desired, and/or shut off or activated by removal and re-installation, respectively. See, e.g., paragraphs 20 and 51 and Fig. 9 of the present application. See the last response for a further discussion and support for these features and benefits.

2. The Cited References

Maxim is directed to a toy vehicle in which a tank is filled with water to suggest fueling a real car. The fueling activates a float to electrically connect the motor for propelling the toy vehicle. Maxim otherwise teaches the use of a "conventional DC motor" connected to a "conventional 9 V battery". See Col. 3, line 3 and Col. 4, lines 44-45. The motor receives, at one end, connectors for wires that extend from a battery. As shown, e.g., in the side view of Figs. 1and 2 of Maxim, the ends of the wires 80, 83 are both soldered at the same end of the motor.

The Maxim motor is just the type of motor that is discussed in the "Description of the Related Art" of the present application. As noted therein, it is required to solder one end of each corresponding conductive wire (lead wire) to the corresponding electrode of the motor, respectively, and to connect the other end of each corresponding conductive wire to each electrode of the battery. It is also described that such a motor is difficult to miniaturize, as it is hard to solder small parts, and the rigidity of the connection cannot be assured. Also, such soldered connections would not allow the motor to be easily removed and replaced, where desired. So the Maxim structure is similar to and suffers from the same drawbacks as the prior art discussed in the present application.

Thus, at most, Maxim teaches a toy vehicle that is propelled by a DC motor which has a conventional one end only connection to the battery power via soldered wires. While Maxim suggests that an object is to eliminate the "electronic circuitry" characterized by his earlier toy vehicle which is the subject of U.S. Patent No. 4,347,683, Maxim in the '648 patent teaches one of ordinary skill that at a minimum, the soldered wires 80, 83 are necessary for connecting one end only of the motor to the battery terminals. Another wire 82 is related to the float.

It appears that the Examiner agrees with the very general teaching of Maxim since it is noted in the Action that the reference teaches "a toy vehicle with a DC motor connected to a battery by at least one connector", but the Action expressly acknowledges that most recited features are not taught at all. See page 4 of the Action, lines 8-17 ("except for a rotor or a motor having a first and second terminal...and a second end which is exposed on an exterior end portion of the insulating small case body."). Nevertheless, Sato is cited for teaching these many recitations, but again it is expressly acknowledged that Sato fails to teach "the terminals connected to the battery directly or through at least one conductive member". As for the always necessary "motivation" to combine to support the alleged obviousness rejection, the Examiner concludes that "it would have been obvious ...to modify Maxim's invention and provide a motor connected to a battery in order to provide a power to said motor."

The question then, under Graham v. John Deere, is whether Sato suggests modification of Maxim to arrive at any of the claims herein. It is respectfully submitted that the answer is no.

Sato's motor (4) is a vibratory motor that has an eccentric weight (3) rotatable on a shaft (2), and the motor is intended to be used with a pager or portable phone. See the English translation or record and Fig. 10 of the reference which shows the weight (3): "This structure is for producing great centrifugal force as the eccentric weight 3 rotates, thereby providing high vibration."

a. The '650 Reference Is Non-analogous Art

Initially, it is not believed that one of ordinary skill would have considered the Sato reference analogous art and therefore would not have considered same.

In determining whether prior art is analogous, the following criteria are important:

> (1) whether the art is from the same field of endeavor, regardless of the problem addressed and
>
> (2) if the reference is not within the field of the inventor's endeavor, whether the reference is reasonably pertinent to the particular problem with which the inventor is involved.

In re Deminski, 796, F.2d 436, 442, 230 U.S.P.Q. 313, 315 (Fed. Cir. 1986); In re Wood, 599F.2d 1032, 1036, 202 U.S.P.Q. 171, 174 (CCPA 1979); and In re Clay 23 U.S.P.Q. 2d 1058 (Fed. Cir. 1992).

In these regards, "the similarities and differences in structure and function of the invention disclosed in the references ... carry far greater weight [in determining analogy]." In re Ellis, 476 F.2d 1370, 1372, 177 U.S.P.Q. 526, 527 (CCPA 1973).

i. Not the Same Endeavor

Vibrating cell phones and pagers is not an endeavor like that of propelling a toy vehicle actuated by filling a "gas" tank thereof with water.

ii. Not Reasonably Pertinent to the Problem

The Sato reference does not relate to the problems sought to be addressed by the present invention, i.e., how to both reliably propel a toy, allow greater miniaturization of the toy and allow facilitated removal and replacement of the motor. The Sato reference, simply does not relate to propelling a toy vehicle, and could not since its function is merely to cause "high vibration" of an otherwise stationary device through great centrifugal force.

b. The Sato Reference Is Not a Particularly Relevant Reference for the Intended Improvement

Even if a person of ordinary skill were to consider the Sato reference as analogous, it is doubted that said person would consider such a vibratory motor to be beneficial teaching when trying to improve upon a motor to propel a toy vehicle like Maxim's. The vibratory, weighted motor of the Sato reference would cause a toy vehicle to, at the least, wobble, and at the worst, flip over, rendering the toy vehicle inoperable for its intended function, i.e., being propelled along a path. Also, the "fuel", i.e., water, in Maxim's tank could spill out, severing the electrical connection that allows the Maxim toy vehicle to be propelled in the first place.

c. The Cited Combination Fails to Render Obvious the Claims

Even if one of ordinary skill were to consider the teaching of the Sato reference relevant, it is respectfully submitted that the invention as recited would not have been obvious.

The Action admits that the Sato reference at least fails to teach the recited feature of "terminals connected to the external battery directly or through at least one conductive member." However, the Action concludes that the one would be motivated to modify Maxim by providing a motor connected to a battery to provide power to said motor. Why would such a substitution be made to Maxim is Maxim already teaches a motor 30 connected to a battery 72.

The issue is not merely connecting a motor to a battery, but how is it done and is the way recited by the present claims "obvious" from the prior art? It is not obvious to totally eliminate structure taught by the primary reference as being necessary, i.e., the wires 80 and 83 as described above, with an entirely different motor and connection scheme.

As also noted above, while Maxim raises the possibility of reducing the electrical connection, Maxim did not do away with at least one of the wires 80, 83, as the Examiner appears to suggest would be obvious.

Also, Maxim suggests that it is a goal of his invention to reduce costs (Col. 1, line 33), but it highly doubted that a vibratory motor like Sato's would be less costly to make than the tried-and-true end-soldered electric motor common to Maxim and the prior art discussed in the present application.

The Action does not advise what specific substitution would be obvious to energize the Maxim motor based on Sato. Is it replacement of the wires 80, 83 of Maxim with the electrodes 8 of Sato? If so, how? Are conductive members to extend between the button battery and the motor? In any case, there is certainly no suggestion that the battery should be directly connected to any electrode of the motor in either the Sato or Maxim references. Further, there is no suggestion that the battery of Maxim be connected to either a conductive side of a motor and/or an electrode at an end of the motor, directly or by conductive members.

C. New Claims

New claims 58-61 are added. These claims are based on claims 5 and 7, but recite either a direct battery connection or a connection via at least one conductive member. The art of record fails to teach or disclose that the battery should be directly connected to any electrode of the motor.

III. CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that claims 5-15 and 32-61 are now in condition for allowance.

If there are any additional fees associated with this Response, please charge same to our Deposit Account No. 19-3935.

Finally, if there are any formal matters remaining after this Response, the undersigned would appreciate a telephone conference with the Examiner to attend to these matters.

Respectfully submitted,

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Date: 1/5/06

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